

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: NORTON POND	Lake Area (ha): 4.61
Town: RAYMOND	Maximum depth (m): 4.8
County: Rockingham	Mean depth (m): 1.6
River Basin: Coastal	Volume (m ³): 75500
Latitude: 43°00'39" N	Relative depth: 2.0
Longitude: 71°15'18" W	Shore configuration: 1.05
Elevation (ft): 355	Areal water load (m/yr): 14.83
Shore length (m): 800	Flushing rate (yr ⁻¹): 9.00
Watershed area (ha): 142.4	P retention coeff.: 0.51
% watershed ponded: 0.0	Lake type: natural

BIOLOGICAL:

11 January 1996

9 August 1995

DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 55%	DINOBRYON 50%
	#2	PERIDINIUM 35%	CERATIUM 25%
	#3		PERIDINIUM 20%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			7.46
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 70%	CONOCHILUS 75%
	#2		KERATELLA 5%
	#3		NAUPLIUS LARVA 5%
ROTIFERS/LITER		39	908
MICROCRUSTACEA/LITER		7	85
ZOOPLANKTON ABUNDANCE (#/L)		46	1007
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			2.5
BOTTOM DISSOLVED OXYGEN (mg/L)		3.0	0.5
BACTERIA (E. coli, #/100 ml)	#1		< 1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 3.0
Hypolimnion volume (m³): 3400
Anoxic volume (m³): 10000

CHEMICAL:

Lake: NORTON POND

Town: RAYMOND

	11 January 1996		9 August 1995		
DEPTH (m)	1.0	3.0	1.0	3.0	4.0
pH (units)	5.6	5.7	6.1	6.0	5.9
A.N.C. (Alkalinity)	3.3	5.0	6.2	6.3	5.1
NITRATE NITROGEN	< 0.10	< 0.10	< 0.10		< 0.10
TOTAL KJELDAHL NITROGEN	0.42	0.57	0.43	0.53	0.58
TOTAL PHOSPHORUS	0.006	0.009	0.010	0.017	0.027
CONDUCTIVITY (μ mhos/cm)	90.1	91.4	86.4	84.8	84.9
APPARENT COLOR (cpu)	90	90	55	58	60
MAGNESIUM			1.14		
CALCIUM			3.9		
SODIUM			9.1		
POTASSIUM			0.50		
CHLORIDE	17	17	18		17
SULFATE	10	9	4		5
TN : TP	70	63	43		21
CALCITE SATURATION INDEX			3.8		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1995

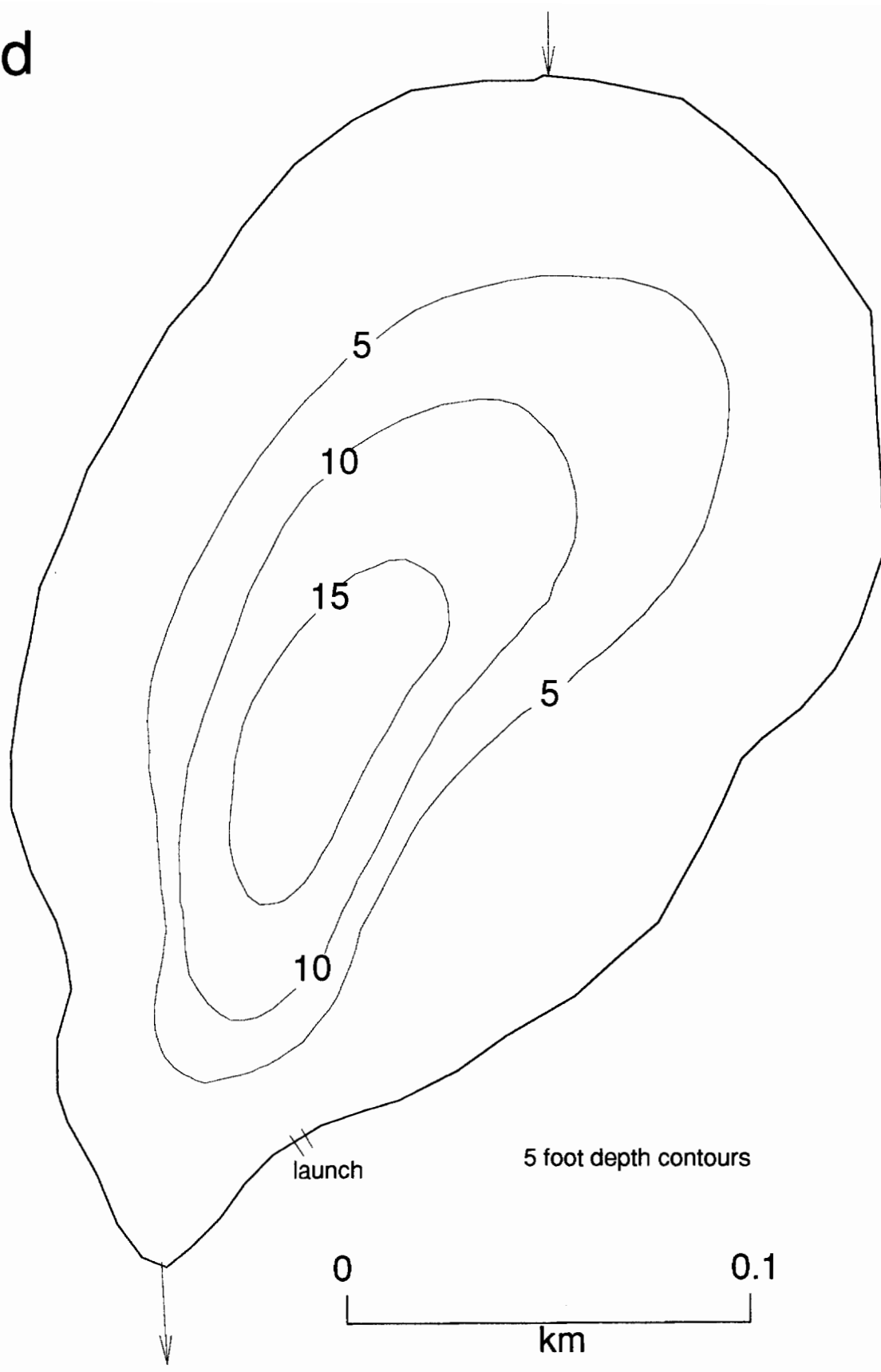
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
4	3	5	1	13	Eutro.

COMMENTS:

1. This is a small, tea-colored somewhat acidic eutrophic pond with abundant phytoplankton, zooplankton and macrophyte growth. The pond is surrounded by wetlands that are encroaching into the pond. There was no dissolved oxygen below 2.5 meters.
2. A canoe launch site was present off Lane Road through a small opening in the shrubbery surrounding the pond.
3. This is probably a naturally eutrophic pond. Only two houses were located near the pond. The phosphorus was not excessive although it was elevated in the anoxic bottom waters. Sodium and chloride levels suggest some salt drainage to the pond.

Norton Pond

Raymond



[illegible]

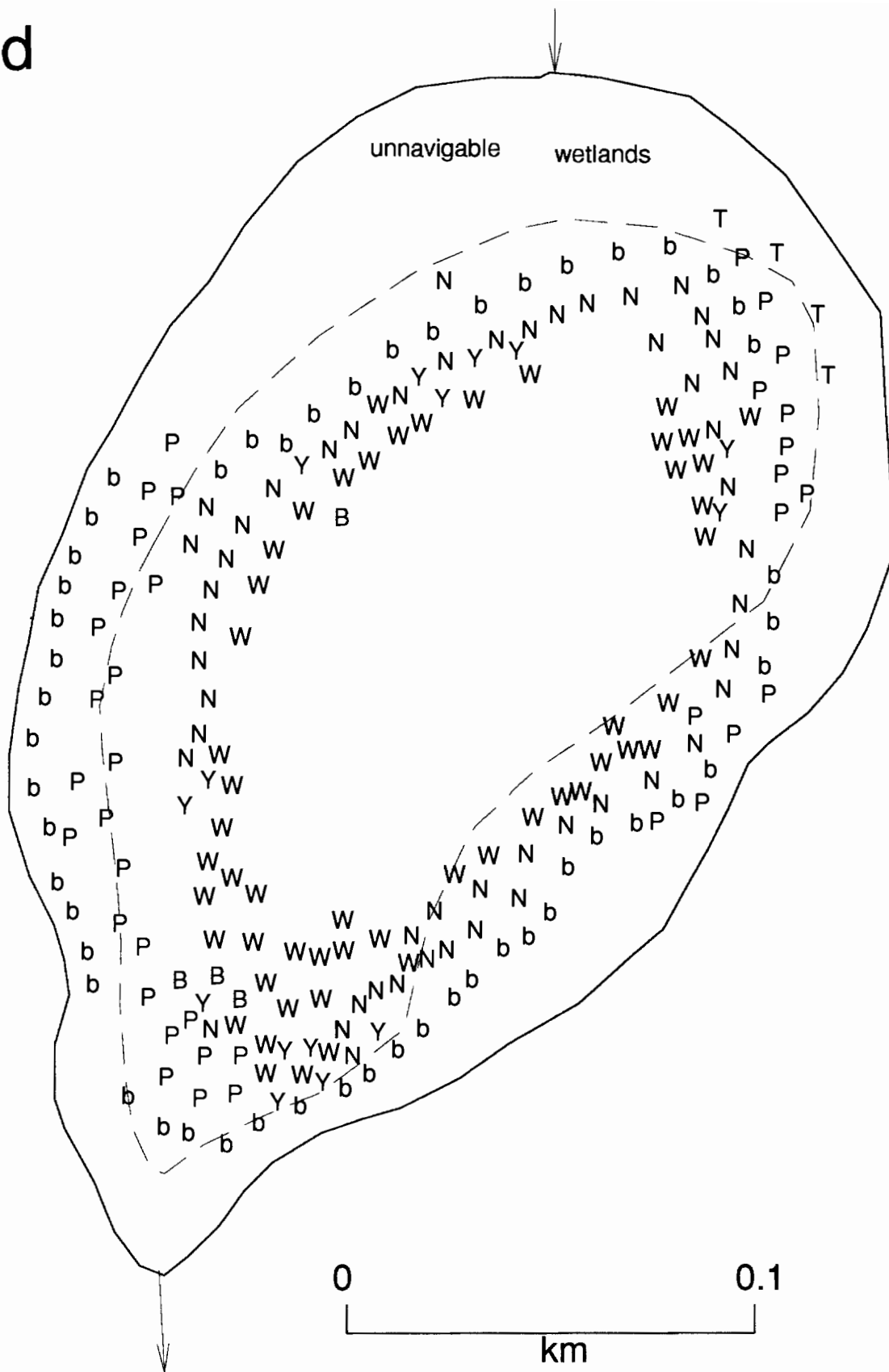
Norton Pond Raymond

N

unnavigable wetlands

dotted line is the demarcation
between open water and wetland

0 0.1
km



AQUATIC PLANT SURVEY

LAKE: NORTON POND

TOWN: RAYMOND

DATE: 08/09/95

[illegible]

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

1. This is a small, weedy pond filling in with plants. Lilies and bladderwort were abundant in the open water along the fringes of the wetlands that surround the pond. Bulrushes and pickerelweed were abundant in the wetlands.
2. A great blue heron was present and small fish were seen jumping.